

REMARKS

In response to the Office Action dated October 17, 2008, Applicants respectfully request reconsideration based on at least the following remarks. Applicants respectfully submit that the claims as presented herein are in condition for allowance.

The Examiner has stated that claims 13-16 are allowed. Applicants are grateful for indication of the same.

Claims 1-4, 10 and 13-16 are pending in the present application, while claims 5-9, 11, 12 and 17-30 are withdrawn from further consideration. Claims 1-4 and 10 stand rejected. Claims 1 and 10 have been previously amended to define over the prior art of record, as described in further detail below. No new matter has been added by the amendments. Applicants respectfully request reconsideration of claims 1-4 and 10 based upon the following remarks.

Claim Rejections Under 35 U.S.C. § 103

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over May (.S Patent No. 4,454,417, hereinafter “May”) in view of Colgan, et al. (U.S. Patent No. 6,529,189 B1, hereinafter “Colgan”), as stated on pages 2-3 of the Office Action. Applicants respectfully traverse for at least the following reasons.

A conventional light pen is turned on when the conventional light pen makes contact with a surface of an LCD panel. However, when the conventional light pen makes contact with the surface of the LCD panel, the surface of the LCD panel may be damaged. Therefore, in order to reduce damage to the surface of the LCD panel, the light pen of the present invention senses light emitted from the LCD panel to be turned on when the light pen approaches the LCD panel, instead of when the light pen makes contact with the LCD panel. However, environmental light must also be considered. Therefore, in order to turn on the light pen only when the light pen approaches the LCD panel, the control module in claim 1 outputs a control signal in response to a sensing signal when the level of the sensing signal is higher than a level of a reference signal.

In contrast, May merely discloses a stylus as described as prior art in the Background section of the present application. More specifically, May discloses that a switch 32 is provided with a spring biased member 56 which is disposed adjacent the rear-end of collimation tube 22. In the inactive condition, the spring action of the member 56 biases the collimation tube into its maximum forward position. In use, the operator presses the collimation tube against the front surface of the screen 46 causing the collimation tube to move rearwardly relative to the housing 20. (Col. 7, lines 21-28). Thus, May discloses the conventional light pen which generates the light only when the light pen applies more than a predetermined pressure to the surface of the display device so as to reduce power consumption of the light pen. In addition, May discloses a conventional light pen having a lens 42 and having a complicated configuration. Therefore, the cost for manufacturing the light pen of May increases, and the weight and volume of the light pen of May increases, as discussed as disadvantages in the Background section of the present application.

More specifically, May discloses with reference to FIGS. 1, 2 and 5 relied upon by the Examiner a cylindrical collimation tube 22 slidably mounted within the front end of housing 20. A photo detective module 30 is housed inside the elongated

cylindrical housing 20 and mounted to the rear of the collimation tube 22. A lens 42 is mounted within the channel 38 of the collimation tube 22 adjacent the front end thereof. (Col. 5, line 45- col. 6, line 16). Thus, May discloses that the photo detective module 30 is not exposed to the exterior.

Col. 8, lines 11-21 of May relied upon by the Examiner for the proposition that May discloses the photo detective module exposed an exterior of the body merely discloses that:

The amplitude of the pulses is governed by the intensity of the light rays received by the light pen. When the light pen is placed on the video screen in direct alignment with one of the lines traced by the cathode ray, a pulse having a maximum amplitude, as illustrated by curve A in FIG. 3, will be produced. In contrast, if the light pen is placed on the video screen in a location displaced slightly from one of the lines traced by the cathode ray, a pulse having a lower amplitude will be generated, as illustrated by curve B in FIG. 3.

(Col. 8, lines 11-21).

Thus, May does not disclose, teach or suggest the photo detective module is exposed to an exterior to the body, as recited in independent claim 1.

Likewise, Colgan merely discloses a stylus provided with push-buttons near its tip that can be actuated by the user during the course of pointing the stylus at a touch screen location. (See Abstract.) More specifically, Colgan just discloses a stylus input device for a touch screen, having no direct wire connection to the computer, with an ability to input right and left mouse button control input signals. (Col. 1, lines 10-54 and col. 2, lines 32-43.) Accordingly, by the combined actuation of the touch screen and a concurrent actuation of one or more of the push buttons, a mouse input to the computer is accomplished. (See Abstract.) In particular, Colgan discloses in column 3, lines 28-34 that the microcontroller 26 is normally in a "sleep" mode and in this state draws only a few microamps from battery 28. Microcontroller 26 is caused to automatically exit its sleep mode when one of buttons 12 or 14 is depressed or released. It then pulses light emitting diode (LED) 18, via an output pin, to indicate the new button state.

The Examiner states that “it would have been obvious to one skilled in the art at the time of the invention was made to modify May’s light pen using the idea of Colgan et al. of including light generating module to make a light pen with improved operation where a detector detects a first light to output a sensing signal and a control module outputs a driving signal in response to the sensing signal to generate a second light.” (Page 3 of the Detailed Action). However, it is respectfully submitted that the sensing signal of Colgan is generated based on the push of the push buttons 12 and 14 that is generated regardless of the first light. In contrast, the sensing signal of the present invention is generated based on the first light.

Thus, Colgan teaches a stylus for actuation of a “touch screen” and buttons 12 and 14 for mouse button emulation, and teaches away from a light pen for actuation of photosensors on the external device.

From another perspective, the light pen of the present invention includes i) the photo detective module, ii) the control module and iii) the light generating module. The Examiner states that the photodetector 30 of May corresponds to i) the photo detective module of the present invention and the LED 18 of Colgan corresponds to iii) the light generating module of the present invention. However, ii) the control module of the present invention that generates the light generating module in response to the sensing signal of the photo detective module is not disclosed in May or Colgan.

It is respectfully submitted that neither May nor Colgan, either alone or in combination, disclose, teach or suggest the invention as recited in independent claim 1. May does not disclose, teach or suggest the photo detective module is exposed to an exterior to the body. Colgan does not disclose, teach or suggest the photo detective module, and thus also does not disclose, teach or suggest the photo detective module is exposed to an exterior to the body. Therefore, even if May and Colgan were to be combined with each other, May and Colgan cannot teach or suggest the organic combination of the photo detective module and the light generating module.

More specifically, neither Colgan nor Mumford, either alone or in

combination, disclose, teach or suggest a photo detective module that is configured to **detect a first light inputted from an external source** to output a sensing signal of which level is changed in accordance with an intensity of the first light, the photo detective module being disposed in the body, **the photo detective module is exposed to an exterior to the body**; a control module that is configured to output a control signal in response to the sensing signal when the level of the sensing signal is higher than a level of a reference signal; **and a light generating module that is configured to receive a driving power signal in response to the control signal to generate a second light**, as recited in independent claim 1.

Thus, Applicants respectfully submit that claim 1, including claims depending therefrom, i.e., claims 2-4 and 10, of the present invention are patentable over the cited references.

Accordingly, it is respectfully submitted that the rejection of claims 1 and 2 under 35 U.S.C. § 103(a) be withdrawn.

Claims 3, 4 and 10 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over May in view of Colgan and in further view of Traub (U.S. Patent No. 3,911,270, hereinafter "Traub") as stated on pages 3-5 of the Office Action. Applicants respectfully traverse for at least the following reasons.

The Examiner states that May in view of Colgan discloses all of the elements of claims 3, 4 and 10 except *an opening at the end of the body and a tip having a cylinder flange shape*, which the Examiner further states is disclosed primarily in FIG. 1 and column 2, lines 25-31 and 54-58 of Traub.

Independent claim 1, from which claims 3, 4 and 10 depend, is submitted as being allowable for defining over May in view of Colgan, as discussed above.

Furthermore, it is respectfully submitted that *an opening at the end of the body and a tip having a cylinder flange shape* as allegedly taught or suggested by Traub or any other disclosure of Traub does not cure the deficiencies noted above with respect to May in view of Colgan.

Accordingly, it is respectfully submitted that the rejection of claims 3, 4 and 10 under 35 U.S.C. § 103(a) be withdrawn.

Conclusion

In view of the foregoing remarks distinguishing the prior art of record, Applicants respectfully submit that this application is in condition for allowance. Early notification to this effect is requested. The Examiner is invited to contact Applicants' attorneys at the below-listed telephone number regarding this Amendment or otherwise regarding the present application in order to address any questions or remaining issues concerning the same. If there are any charges due in connection with this response, please charge them to Deposit Account 06-1130.

Respectfully submitted,

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